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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,265	12/13/2000	Robert M. Fuerst	A1-051 US	1926

7590 12/18/2001
Stacey E. Caldwell
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EXAMINER

NGUYEN, PHUONGCHI T

ART UNIT	PAPER NUMBER
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2833

DATE MAILED: 12/18/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/737,265	FUERST ET AL.	
	Examiner	Art Unit	
	Phuongchi T Nguyen	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 02 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-15 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 16-20 and 22-24 is/are rejected.
- 7) ☒ Claim(s) 6 and 21 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 20) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgement of Applicant amendment filed on October 02, 2001. It is noted that the specification has been amended.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 7-8, 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Martellotti (US4971575).

In regards to claim 1, Martellotti discloses a connector assembly comprising a male connector (adjacent 15A) including a relatively rigid male body member (15A) having an edge (17) about which the flexible circuit (10A) is wrapped with the first conductors (13) of the circuit (10A) facing away from the body member (15A) at the edge (17) thereof; and an adapter (21A, 21B) including a first receptacle (slot adjacent 26 of 21A) for receiving the male connector (adjacent 15A) inserted edge-first into the first receptacle (slot adjacent 26 of 21A), and a second receptacle (slot adjacent 26 of 21B) for receiving the second conductors (13 of 13B) in position for engaging the first conductors (13 of 15A) of the flexible circuit (10A) at the edge (17) of the male body member (15A) (see figures 2, 4).

In regards to claim 7, in combination with the connector assembly above, Martellotti discloses a printed circuit board (15B) inserted into the second receptacle (slot adjacent 26 of 21B) of the adapter (21A, 21B), the printed circuit board (15B) having the second conductors (13

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of 15B) engageable with the first conductors (13 of 15A) of the flexible circuit (10A) (see figure 4).

In regards to claim 8, in combination with the connector assembly above, Martellotti discloses a second flat flexible circuit (10B) inserted into the second receptacle (slot adjacent 26 of 21B) of the adapter (21A, 21B), the second flexible circuit (10B) having the second conductors (13 of 10B) engageable with the first conductors (13 of 10A) (see figure 4).

In regards to claim 16, Martellotti discloses a connector assembly comprising a male connector (adjacent 20A) including a relatively rigid male body member (20A) having an edge (22) about which the flexible circuit (30 of 20A) is wrapped with the first conductors (31 of 20A) of the circuit (30 of 20A) facing away from the body member (20A) at the edge (22) thereof; and a female connecting device (20B) including a receptacle (slot adjacent 30 of 20B) for receiving the male connector (20A) inserted into the receptacle (slot adjacent 30 of 20B), and means on the device (20B) for positioning the second conductors (31 of 20B) in engagement with the first conductors (31 of 20A) of the flexible circuit (31 of 20A) at the edge (22) of the male body member (20A) (see figure 7).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-5 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martellotti (US4971575) in view of Perino et al (US6234820B1).

In regards to claim 2, Martellotti lacks a relatively yieldable backing structure. However, Perino teaches a relatively yieldable backing structure (370) on the body member (150) at the edge thereof beneath the flexible circuit (365) for resiliently biasing the first conductors of the circuit (365) (see figure 3). It would have been obvious to one having ordinary skill at the time the invention was made to modify the connector assembly of Martellotti by having a relatively yieldable backing structure as taught by Perino for having flexibility to the first conductor of the flexible circuit onto the adapter.

In regards to claim 3, Martellotti lacks a longitudinal resilient strip. However, Perino teaches the body member (150) is elongated and the yieldable backing structure (370) comprises a longitudinal resilient strip along the edge (see figure 3). It would have been obvious to one having ordinary skill at the time the invention was made to modify the connector assembly of Martellotti by having a longitudinal resilient strip as taught by Perino for increasing contact areas between the flexible circuit and the male connector body and adapter.

In regards to claim 4, Martellotti lacks a position means. However, Perino teaches positioning means (345) on the body member (150) for locating the flexible circuit wrapped about the edge of the body member (150) (see figure 3). It would have been obvious to one having ordinary skill at the time the invention was made to modify the connector assembly of Martellotti by having an positioning means as taught by Perino for being adhesive the flexible circuit onto the male body member.

In regards to claim 5, it would have been obvious to one having ordinary skill at the time the invention was made to modify the connector assembly of Martellotti by having an adhesive

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as taught by Perino for having a good connection between the flexible circuit and the male body member.

6. Claims 9 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martellotti (US4971575) in view of Kamono et al (US4973264).

Martellotti lacks a plurality of discrete electrical wires. However, Kamono teaches a plurality of discrete electrical wires (50) having the second conductors (30) (see figures 2-4). It would have been obvious to one having ordinary skill at the time the invention was made to modify the connector assembly of Martellotti by having a plurality of discrete electrical wires as taught by Kamono to engage with the first conductors of the flexible circuit for having a different connection when the user needed.

Claims 17, 18, 22, 23 are rejected for the same reason of claims 2, 3, 7, 8, respectively.

Allowable Subject Matter

7. Claims 6 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 10-15 are allowed.

Response to Arguments

9. In response to Applicant's argument on page 3, lines 17-18, the statement that "there is no teaching or even a remote suggestion that the conductors are to be engaged at the edges of the support members" is not deemed persuasive; because in Merriam Webster's Collegiate Dictionary, tenth edition, page 366, "edge" is defined as "the narrow part adjacent to a border" or "a point

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near beginning or the end" (see Attachment 1). Therefore, Martellotti does show that the second conductor ¹³(~~B~~) engages the first conductor (13 of 15A) of the flexible circuit (17) adjacent the edge (17) of the male body member (15A).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREEMONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi T Nguyen whose telephone number is (703) 305-0729. The examiner can normally be reached on Monday through Thursday from 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7723 for regular communications and (703) 305-7723 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308722.

December 3, 2001

A handwritten signature in black ink, appearing to read "Hodart", is located in the lower right quadrant of the page.

Merriam-
Webster's
Collegiate
Dictionary

TENTH EDITION

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